

## AGE-RELATED URODYNAMIC RESULTS IN 123 CONSECUTIVE MEN LESS THAN 50 YEARS OLD WITH LUTS.

Hypothesis / aims of study: Although less frequent, some young men present lower urinary tract symptoms (LUTS) and the specific cause may be puzzling and controversial. We conducted this study to determine the presence and characterize the obstruction (BOO) and its urodynamic consequences in this particular group of patients.

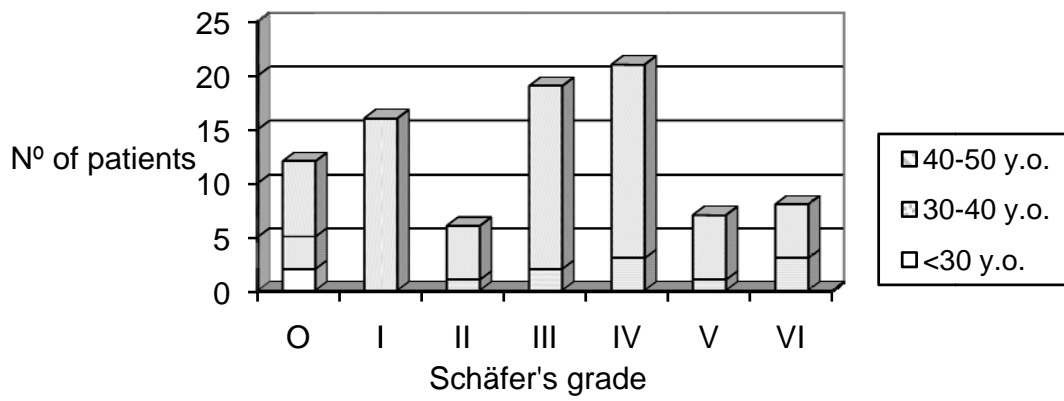
Study design, materials and methods: One hundred twenty three consecutive men less than 50 years-old with LUTS underwent multi-channel urodynamics with evaluation of bladder outlet obstruction index (BOOI), bladder contractility index (BCI) and the Schäfer's flow-pressure graph, including the isometric contractile capacity. Clinical parameters incorporated the International Prostatic Symptoms Score (IPSS), age and time since the initial symptoms. The results were correlated and submitted to statistical analysis.

Results: There were six patients (5%) less than 30 years old, twenty six (21%) between 30 and 40 and the others ninety one patients (74%) between 40 and 50 years old. Men younger than 40 years old had the same grade of obstruction than the observed in men between 40 and 50 years old (BOOI: 54 x 50.1;  $p = 0.69$  and Schäfer's graph:  $p = 0.69$ ) but had a greater isometric contractility capacity (106.3 cmH<sub>2</sub>O x 88.5 cmH<sub>2</sub>O;  $p = 0.03$ ). Patients with more symptoms (IPSS  $\geq 8$ ) presented more obstruction than patients with IPSS  $\leq 8$  (BOOI: 56.4 x 39.9;  $p = 0.03$  and Schäfer's graph:  $p < 0.001$ ), last more time to develop the symptoms (57.7 months x 32.3 months;  $p = 0.007$ ) but had the same isometric contractile capacity (94.9 cmH<sub>2</sub>O x 86.9 cmH<sub>2</sub>O;  $p = 0.23$ ). The more obstructed group of patients (Schäfer IV, V and VI) presented greater isometric contractile capacity than patients situated in Schäfer 0, I, II and III (122 cmH<sub>2</sub>O x 75.1 cmH<sub>2</sub>O;  $p < 0.001$ ) (FIGURE 1).

Interpretation of results: Obstruction may be considered a real possibility in young male patients, as seen in 5% of those younger than 30 years old and in 26% considering all younger than 40 years old. The presence of 23% of them with Grade 0 and I (unobstructed) make the urodynamic examination mandatory before aggressive approaches. The score of symptoms is higher in those with more obstructed micturition and in those with more time of symptoms, suggesting that obstruction and symptoms are time dependent experiences. Young obstructed men have greater isometric detrusor capacity, independent of the grade of obstruction. This finding can explain different clinical consequences in the young groups compared to the older group with similar grade of obstruction. Conversely, the presence of higher detrusor contraction capability in the more obstructed group (IV, V and VI) can not be considered a direct consequence of obstruction.

Concluding message: Urodynamic examination is mandatory before aggressive interventions in male patients younger than 50 years old complaining of LUTS, especially because of the high rate of unobstructed men between them (23%).

**Fig 1. Age distribution in Schäfer's Graph**



**FUNDING:** No funding or grant

**HUMAN SUBJECTS:** This study did not need ethical approval because is a retrospective study of urodynamic data but followed the Declaration of Helsinki Informed consent was not obtained from the patients.